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managed by Brookhaven Science Associates  
for the U.S. Department of Energy

Mr. Brian Jankauskas  
New York State Dept. of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway – 12<sup>th</sup> Floor  
New York, New York 12233-7051

October 4, 2021

Ms. Sharon Hartzell  
Federal Facilities Section  
U.S. EPA – Region II  
290 Broadway – 18<sup>th</sup> Floor  
New York, New York 10007-1866

Dear Mr. Jankauskas and Ms. Hartzell:

**SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) INTERAGENCY  
AGREEMENT (IAG) – MONTHLY REPORT FOR SEPTEMBER 2021**

In accordance with the Interagency Agreement (IAG) for Brookhaven National Laboratory (BNL), enclosed is the Monthly Report for September 2021 covering the Long-term Stewardship (LTS) areas listed below:

- Brookhaven Graphite Research Reactor (BGRR) Surveillance and Maintenance
- High Flux Beam Reactor (HFBR), including the Waste Loading Area (WLA) Surveillance and Maintenance
- Soil and Water Remediation

If you have any questions, please call Gerald Granzen at (631) 344-4089.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Dorsch", with a stylized flourish at the end.

William Dorsch, Manager  
Groundwater Protection Group

Enclosure, as stated:

P. Armani, NYSDEC  
C. Costello, NYSDOH  
D. O'Hehir, NYSDOH  
S. Rushford, NYSDOH  
A. Rapijko, SCDHS  
J. Wanlass, SCDHS  
M. Soucie, NYSDOH  
D. Pocze, EPA

J. Carter, BHSO  
K. Eng, BHSO  
R. Gordon, BHSO  
G. Granzen, BHSO  
C. Kwok, BHSO  
G. Olson, BHSO  
C. Polanish, BHSO  
J. Remien, BSA  
S. Coleman, BSA  
R. Howe, BSA  
D. Paquette, BSA  
V. Racaniello, BSA  
A. Engel, BSA  
File: GWER 17.1.21

**Brookhaven National Laboratory  
Interagency Agreement (IAG) Monthly Report  
September 2021  
Long Term Stewardship (LTS) Activities**

**BROOKHAVEN GRAPHITE RESEARCH REACTOR (BGRR) SURVEILLANCE AND  
MAINTENANCE**

**Current Month Technical Performance Analysis**

***Accomplishments and/or Technical Achievements***

- Conducted routine surveillance and maintenance (S&M) activities.
- Continued to provide support to the Quantum Free Space Link Project that will utilize part of the Building 701 upper roof.

***Highlights of any changes to objectives and description of any changes in technical approach***

- None.

***Key Issues***

- None.

**Planned Actions for the Next 90 Days**

- Quarterly inspection of the high bay and former offices and annual inspection of the engineered cap is scheduled for 10/26/21.
- Continue S&M activities.

**HIGH FLUX BEAM REACTOR (HFBR) INCLUDING, STACK, GROUNDS, AND WASTE  
LOADING AREA (WLA) SURVEILLANCE AND MAINTENANCE**

**Current Month Technical Performance Analysis**

***Accomplishments and/or Technical Achievements***

- BSA and BHSO participated in the weekly stack demolition coordination teleconferences among the contractor, the Army Corps of Engineers (USACE) and DOE's Office of Environmental Management (EM).
- The USACE and contractor briefed the regulators and Community Advisory Council (CAC) on the status of the stack demolition 9/2/21 and 9/9/21, respectively.
- The contractor performed the final status survey (FSS) which includes the walkover survey and soil sampling, and Oak Ridge Institute for Science and Education (ORISE) completed their independent verification surveys of the stack cleanup.
- Grouting of the pedestal drain lines, backfilling and final grading of the stack area was completed. The contractor demobilized from the site.

- As requested, the analytical data for the composite sample obtained from the backfill material that was brought onto the HFBR site from off-site was submitted to NYSDEC 9/23/21.
- Community Air Monitoring Plan (CAMP) PM-10 monitoring was temporarily restarted during the backfilling activities.

***Highlights of any changes to objectives and description of any changes in technical approach***

- None.

***Key Issues***

- Continue to perform the remaining project activities safely.

**Planned Actions for the Next 90 Days**

- Continue S&M activities.
- Contractor to complete the stack area restoration with hydroseeding.
- Contractor to conduct off-site disposal of the paint/sludge material generated from the stack exterior coating abatement.
- ORISE to prepare and submit their independent verification report for BSA, DOE and USACE review. It will be included as an appendix to the contractors Closeout Report.
- Contractor to prepare and issue the draft Closeout Report for BSA, DOE and USACE review prior to submittal to the regulators in mid-November.

**SOIL AND WATER REMEDIATION**

**Current Month Technical Performance Analysis**

***Accomplishments and/or Technical Achievements:***

- The IAG monthly teleconference was held 9/2/21 and included updates on the HFBR stack and Building 650 demolition, the upcoming CAC meeting and a groundwater characterization update.
- Responses to NYSDEC/NYSDOH and SCDHS comments on the Five-Year Review Report were submitted to the regulators 9/22/21 for concurrence.
- Submitted responses to NYSDEC/NYSDOH comments on the 2020 Groundwater Status Report to the regulators 9/28/21 for concurrence. The June 2021 Report is considered final.
- The BNL 2020 Site Environmental Report was issued to the BNL website.
- Work continued on the PFAS Time Critical Removal Action (TCRA) groundwater remediation including:
  - The contractor continued field work with the installation of three of the 11 extraction wells, and began trenching/installation of non-potable water pipe.
  - BHSO submitted responses to NYSDEC comments and the Final Design Report for the PFAS Time Critical Removal Action to the regulators 9/28/21. The Final Report was also posted to the BNL Teams IAG Documents site.
  - The surveyor is field marking the locations and the well drilling contractor began installation of the 83 monitoring wells for the PFAS treatment systems.

- Continued the installation of temporary wells using the Geoprobe to characterize extent of high concentration PFAS segment initially detected along West Princeton Avenue. A total of seven additional locations were sampled.
- Completed installation of 12 monitoring wells in the southwest portion of the BNL site to better define groundwater flow directions within source water contributing area of the William Floyd Parkway Wellfield. Several wells will serve a dual purpose as outpost wells for the wellfield.
- Extraction well EW-1 at the OUVI EDB Groundwater Treatment System stopped operating. The BNL electricians performed repairs and the well was restarted.
- Western South Boundary extraction well WSB-4 stopped operating. Well drilling contractor pulled and replaced the pump, and the well was restarted.
- The BGRR Sr-90 Groundwater Treatment System was restarted following the recently completed ion-exchange resin vessel change-out. However, extraction well SR-1 is not working. The well drilling contractor will pull the pump and evaluate.
- Repairs were completed to the gates at the former Hazardous Waste Management Facility (HWMF) Waste Loading Area.
- The BNL Water and Sanitary Planning Team met 9/7/21.
- Processed invoice and paid the State via electronic funds transfer 9/17/21 for the annual reimbursement of reasonable administrative and technical review costs incurred under the BNL Federal Facilities Agreement.
- Responded to EPA request to verify the GIS boundaries they have on file for BNL.

***Highlights of any changes to objectives and description of any changes in technical approach***

- None.

***Key Issues***

- The Laboratory continued COVID-Phase 2 operations. The Groundwater Protection Group (GPG) maintained minimal staff working on-site to manage field activities. All other GPG staff continue to work remotely.

**Planned Actions for the Next 90 Days**

- The Laboratory and GPG will continue COVID-Phase 2 operations.
- The monthly IAG teleconference is scheduled for 10/7/21 and will include updates on the HFBR stack post-demolition cleanup, the upcoming CAC meeting and a groundwater update.
- The CAC meeting is scheduled for 10/14/21 and will include a brief stack update.
- The Brookhaven Executive Roundtable is scheduled for 10/27/21 and will include updates on the HFBR stack and PFAS groundwater activities.
- PFAS Source Area Groundwater Remediation Systems extraction well installations will restart early October using mud rotary drilling for the remainder of the deeper extraction wells.
- Well drilling contractor to continue installation of 83 monitoring wells associated with the PFAS Source Area Groundwater Remediation Systems.
- The BSA riggers are planning to install the carbon vessels in Building 492 for the planned Current Firehouse PFAS groundwater treatment system in early October.

- Prepare revision of the TCRA PFAS Characterization Report to incorporate data from the additional temporary wells installed during April-September, and editorial comments received from NYSDEC/NYSDOH.
- Continue installation of additional Geoprobe wells between West Princeton Avenue and the field west of the Current Firehouse to determine whether PFAS containing foam had been used in this area.
- Prepare and submit the Closeout Report for Building 650 demolition to the regulators.
- BNL Radiological Controls representative to perform the annual survey of the fixed contamination at the former HWMF foundations in early October.